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ABSTRACT

A report of a 3 day teacher workshop attended by 12 teachers of severely handicapped children is presented. Based on nine competencies, such as that teachers should be able to utilize assessment procedures and conduct a task analysis of objectives, the workshop involved a practicum, didactic instruction, modeling, and simulation techniques. Teachers' self evaluations of competence significantly increased as a result of the workshop. (Author/PHR)

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The Effectiveness of Short-Term Training to Prepare Teachers of Severely Handicapped Children

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Abstract

Teachers of severely handicapped children must have exceptional skills and are greatly needed. To meet this demand, a three week workshop was planned. Based on nine competencies, the workshop involved a practicum, didactic instruction, modeling and simulations. Trainees' self-evaluations of competence significantly increased as a result of the workshop. The study has implications regarding short-term training, competency-based teacher education, and field-based training.

Effective Short-term Training of Teachers of the Severely Handicapped: A Pilot Study

Perhaps the greatest challenge to special education teacher training is the preparation of teachers of severely handicapped children. The Bureau of Education for the Handicapped defines this population as follows:

> A severely handicapped child is one who because of the intensity of his physical, mental, or emotional problems, or a combination of such problems, needs educational, social, psychological, and medical services beyond those which have been offered by traditional regular and special education programs, in order to maximize his full potential for useful and meaningful participation in society and for self-fulfillment. Such children include those classified as seriously emotionally disturbed (schizophrenic and autistic), profoundly and severely mentally retarded, and those with two or more serious handicapping conditions such as the mentally retarded-deaf, and the mentally retarded-blind.
>
> Such children may possess severe language and/or perceptual-cognitive deprivations, and evidence a

> number of abnormal behaviors including: a failure to attend to even the most pronounced social stimuli, self-mutilization, self-stimulation, durable and intense temper tantrums, absence of even the most rudimentary forms of verbal control, and may also have an extremely fragile physiological condition (United States Office of Education, Bureau of Education for the Handicapped, 1974).

Thus, this is an exceedingly complex population of children requiring extensive skills not ordinarily possessed by special education or general education teachers. In fact, Sontag, Burke and York (1973) emphasized that there is a direct relationship between the severity of children's disabilities and the competencies needed by their teachers.

Not only are highly trained teachers desirable for severely handicapped children, but such teachers are needed also in great numbers. Prior to recent litigation and legislation involving the handicapped, such children were not educated by public schools; nor, in many cases, by any school at all. Consequently, the current mandate has created a "manpower gap," a need for more trained teachers than are available (Sontag, Certo, & Button, 1979).

A possible solution for this dilemma is short-term, intensive training of sufficient quality to enable teachers to begin programming

and instruction of severely handicapped children. The present study was a preliminary effort to provide and evaluate such a short-term preparation program with the intent of enabling competency acquisition by prospective teachers of severely handicapped children.

The Program

A necessary starting point for any educational program is identification of the outcomes, the objectives of instruction. In teacher preparation this often takes the form of competencies. (Shores, Cegelka, and Nelson, 1973). A competency is defined as "knowledge, skills or behaviors that teachers possess and that have been associated with appropriate pupil change" (Fredericks, Anderson, and Baldwin, 1979, p. 81).

However, there is no validated set of competencies for teachers of severely handicapped children (Burke and Cohen, 1977). There is, however, a large body of opinion as to what skills are necessary for teachers of such children. Burke and Cohen (1977), for example, identified 19 competency areas, which included 50 sub-elements. Fredericks et al. (1979) surveyed teachers who identified 86 "competency indicators". They found amount of instructional time, number of skills task analyzed, and appropriate consequation of behavior to be related to effective teaching. Milne (1979) surveyed 140 teachers and administrators responsible for severely handicapped children to determine the relative value of 20 competencies. She found that those competencies related to direct instruction of the children were more

greatly valued. Her findings emphasized a need for field-based teacher training.

A core of nine competencies serves as a rationale for Texas Tech University's preparation program for teachers of the severely handicapped. These are a synthesis of those described by Burke and Cohen (1977). Described in Table 1 they are performance competencies involving the application of information. These competencies served as the basis for both implementation and evaluation of the present study.

Insert Table 1 about here.

Teacher training programs traditionally rely essentially on lecture, discussion, and the use of audio-visual aids. A recent study (Filler, Hecimovic & Blue, 1978), however, showed that, although such activities did enable the acquisition of information competencies, they did not necessarily lead to acquisition of performance competencies. The authors concluded that field-based training, i.e., practice, was necessary for acquisition of the often more important performance competencies.

With this injunction and a competency orientation in mind, a workshop program was planned. Of short duration -- only three weeks -- the workshop was necessarily compressed and intense. The trainees spent 45 clock hours in which information regarding the program compentencies was presented in a didactic format. Modeling of necessary teaching behaviors was provided, and the trainees were required to demonstrate these behaviors in simulated situations. In addition to

these somewhat artificial classroom experiences, the trainees were required to participate in a teaching role in a classroom for severely handicapped children for a variable number of clock hours. The reason a minimum number of hours was not set for this component of the program was that the criterion for completion of the practicum was documentation of successful teaching of a severely handicapped child, rather than mere completion of a arbitrarily determined amount of time.

In addition to these two categories of activities, the trainees were required to complete two projects, also based on the core of competencies outlined above. For one project the trainees were given a written description and shown a videotape of a severely handicapped child. They were asked to write long-range and short-term objectives to meet the child's educational needs, to identify one area in which to prepare a series of detailed lesson plans including instructional and data collection procedures, and to plan a daily classroom schedule for the child. For the other project they identified a need of a severely handicapped child in their practicum setting, taught the child in that area, and wrote a summary of the experience. This involved assessment, development of a rationale for the activity, task analysis, objective setting, selection of materials, teaching procedures, and data collection and display. Activities successfully taught by the trainees included color discrimination, development of eye contact, toilet training, self feeding, and independent walking.

Procedures

Given a simple description of the nine program competencies, the trainees were asked to rate their degree of competence both before and after completion of the program. This self-evaluation instrument is reproduced in Table 2. For each of the nine items, possible scores ranged from 1 (no awareness of that competency) to 5 (highly competent in that area).

Insert Table 2 about here.

While adequate reliability data are not available for this instrument, Pearson product-moment correlation between pretest and post-test was .978 (n = 12), which may serve as an index of test-retest reliability. Calculation of coefficient alpha, a generalized Kuder-Richardson reliability formula (Novick & Lewis, 1967), yielded a value of .914 (n = 24, pretest and posttest combined), representative of the internal consistency of the items on the scale.

Subjects

Trainees in the program were 12 teachers of handicapped children. Teaching experience in special education or general education ranged from none to 6 years ($\bar{X}$ = 1.83 years) but mean years of experience with severely handicapped children was 0.5 years. Only 4 trainees had any such experience ($\bar{X}$ for those 4 = 1.5 years).

The trainees' mean rating per item on the self-evaluation instrument for competence prior to the workshop was 2.55, approximately midway between "awareness" and "some competence."

Results

After completion of the workshop, the mean rating per item on the self-evaluation instrument was 3.80. The change in mean score per item was 1.25. A dependent sample t-test was utilized to determine the probability of this amount of change and significant change was found (t, 11 df = 7.854, $p < .0005$). A one-tailed probability was utilized because it was not considered that the workshop would result in a decrease in the trainees' perceptions of their degree of competence.

In addition to the statistical results, anecdotal data revealed the impact of the workshop on the trainees. One wrote: "These skills have doubled at least;" and another: "I now feel more competent in knowing what to teach and how to teach it and how to evaluate what I taught." A third trainee summarized the comments of many: "After this workshop, now I know what to teach and how to teach the severely handicapped child."

Discussion

This study appears to document the success of a short-term workshop in increasing the competencies of prospective teachers of severely handicapped children. However, a number of problems, such as the small number of subjects, warrant additional research before any conclusions can be drawn. Of particular concern is the validity of self-evaluation as a means of documenting degree of competence and workshop effectiveness. Further study is needed in this area.

In addition, all of the data, including the trainees' projects, from which conclusions regarding competence were drawn, were written material. Does this mean that information competencies rather than performance competencies are what are actually being measured? While success with the projects and improved self-evaluations of competence would seem to be related to actual performance, the degree of impact of this workshop on performance is not clear. Filler et al. (1978) found that a didactic workshop increased information competencies greatly and performance competencies only minimally. They implied that a workshop involving a practicum, as in the present study, should greatly increase the levels of performance competencies. The data of the present study tend to support that implication.

While results of the present study are not conclusive, they are clearly suggestive that short-term workshops with a competency orientation and a practicum component can result in increased competence of teachers of the severely handicapped. This has implications for institutions of higher education, public school districts and other agencies concerned with this complex population. It may also be relevant to teachers training in other areas. If validated, such workshops may contribute much to fill the need for qualified teachers of severely handicapped children.

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Table 1

Competencies Needed by Teachers of Severely Handicapped Children

Competency	Possible Evidence of Attainment
1. Utilize assessment procedures to establish the entering behavior of the learner and to establish long-range instructional objectives in all relevant curricular areas.	1. Written educational reports detailing current behaviors in each instructional area and recommendations for instructional objectives and teaching methods.
2. Conduct a task analysis of long-range objectives in order to generate a logical sequence of short-term objectives.	2. A set of plans for lessons reflecting the sequence of short-term objectives to be followed. Objectives must specify (a) empirical learner behaviors, (b) the conditions under which they will be preformed, and (c) the criteria by which the learners are to be evaluated.

3. Develop a record keeping system for collecting performance data which will reflect progressive changes in learner behavior.	3. Use of such a system. Data may include measures of frequency, duration, potency, percent correct, trials to criterion, or anecdotal descriptions.
4. Select instructional materials relevant to the long-range and short-term objectives.	4. Lesson plans. Observation of the trainee use of the materials.
5. Clearly communicate the objectives of a lesson and directions to the learner, and give feedback appropriate for the learner's performance.	5. Observation of the trainee. Documentation of learner progress shown in the record keeping system.
6. Establish and implement procedures designed to facilitate learner acquisition of social behaviors appropriate in an instructional setting.	6. Written educational reports, short-term and long-range objectives, the data in the record keeping system, and observation of the trainee.
7. Teach learners so that the behaviors specified in the objectives are demonstrated by them.	7. Should be reflected in data in the record keeping system.

8. Implement the above competencies with groups as well as with individuals.	8. Same as competencies 1-7.
9. Interact with and contribute to the learning of other adults with regard to the learners for whom the trainee is responsible--may include parents, para-professionals, and professionals from other disciplines.	9. Anecdotal reports of the trainee and others; observation.

Table 2

Self Evaluation of Competency Acquisition

For each competency, rate yourself according to the following scale:

1. No awareness
2. Awareness, but no competence
3. Some competence, but need work/assistance
4. Adequate competence
5. Highly competent

Circle your current level of competence with the severely handicapped.

1.	Assessment of entry level behavior	1 2 3 4 5
2.	Task analysis	1 2 3 4 5
3.	Record keeping	1 2 3 4 5
4.	Selection of instructional materials	1 2 3 4 5
5.	Communication with the learner	1 2 3 4 5
6.	Modification of social behaviors (discipline)	1 2 3 4 5
7.	Facilitation of learning	1 2 3 4 5
8.	Teach groups of 2 or more	1 2 3 4 5
9.	Interact with adults (e.g., parents, teacher, supervisors)	1 2 3 4 5